MARIJUANA USE AMONG MINORITY YOUTHS LIVING IN PUBLIC HOUSING DEVELOPMENTS

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ABSTRACT Youths residing in public housing developments appear to be at markedly heightened risk for drug use because of their constant exposure to violence, poverty, and drug-related activity. The purpose of this study was to develop and test a model of marijuana etiology with adolescents (N = 624) residing in public housing. African-American and Hispanic seventh graders completed questionnaires about their marijuana use, social influences to smoke marijuana, and sociodemographic and psychosocial characteristics. Results indicated that social influences, such as friends' marijuana use and perceived ease of availability of marijuana, significantly predicted both occasional and future use of marijuana. Individual characteristics such as antimarijuana attitudes and drug refusal skills also predicted marijuana use. The findings imply that effective prevention approaches that target urban youths residing in public housing developments should provide them with an awareness of social influences to use marijuana, correct misperceptions about the prevalence of marijuana smoking, and train adolescents in relevant psychosocial skills.

Drug use is a major public health concern. Ever-increasing numbers of the nation's youths are initiating precocious drug use, with marijuana being the most prevalent illicit drug. Over the past 5 years, national surveys indicate that marijuana use has increased sharply and represents a reversal of the declines of the prior decade.[1] Specifically, 1 in every 5 students in eighth grade has tried marijuana, and 1 in every 11 has used marijuana in the prior month, and these numbers are rising rapidly. Of all young people who smoke marijuana even once, an estimated 10% will progress to daily use of the drug.[1]

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Adolescent drug use is associated with many negative consequences. Marijuana use affects cognition, judgment, mood, and interpersonal relationships directly,[2,3] as well as family harmony, school attendance, and school achievement.[4] Smoking marijuana also has been associated with involvement in motor vehicle accidents when the drivers were under the influence of marijuana, suicide attempts, convincing a "marijuana-naive" younger sibling to smoke the drug,[4] as well as minor and violent delinquency.[5]

Nationwide survey data obtained from secondary school students indicate that there are higher rates of adolescent drug use in large metropolitan regions compared to rural areas.[1] Prevalence rates for crime are highest in inner-city regions,[6] and trend data for arrest records among inner cities show increases in all major crime categories, including drug-related crimes such as trafficking and possession of illicit substances.[7] A growing literature suggests that there is an association between residence in low-income, urban housing developments and increased risk behaviors for delinquency[8–10] and drug use[11,12] among adolescents. Residents of public housing developments appear to be at markedly different risk for drug use relative to their counterparts who do not live in housing projects, but who share similar demographic characteristics.

Public housing residents perceive greater crime problems and more risk exposure,[8,10,13] have poorer social relationships,[14] experience a higher level of psychological strain,[15] and are more likely to develop problem behaviors.[12] Recent statistics from New York City reveal that residents of public housing developments are exposed to more violent and drug-related crime than residents from adjacent neighborhoods.[16] In some earlier work on early-stage drug use, adults and friends, as well as individual psychosocial characteristics such as poor advertising skills and problem behavior, were important predictors of alcohol and cigarette use among adolescents in public housing.[17,18] In another study,[19] using basic means analyses, youths in public housing were similar to their peers not in public housing; however, results from multivariate tests revealed that residents of housing developments did have poorer academic performance and more alcohol consumption than did participants not in housing developments. Taken together, these studies indicate that youths living in public housing developments may be particularly vulnerable. Economically disadvantaged ethnic minority groups dwell in congested residences within public housing developments characterized by urban blight.[13,20] Unfortunately, most marijuana etiology research has been conducted among white and/or middle-class populations.[4,21,22] The present study focuses on understudied adolescents, at high risk for marijuana use, living in public housing developments in an inner-city region.

Ethnicity and gender are important factors associated with adolescent drug use. Many studies report racial-ethnic differences among adolescent marijuana users.[21,23,24] Among eighth graders, Hispanics reported higher lifetime prevalence of marijuana use (26%) relative to blacks (17%).[1] Research on gender differences in marijuana use is unequivocal. Compared to girls, boys use more marijuana[25,26] and more illicit drugs in general.[1] The differences tend to be the largest at higher frequency levels.

Social influences for the individual to smoke marijuana are prevalent, particularly from relatives, peers, and friends. According to social learning theory,[27] adolescents learn through reinforcement and modeling. Thus, misperceptions that drug use is a standard and widespread practice among relatives and agemates can promote marijuana smoking. Family members can serve as role models for drug use. Many studies have found parental drug use to be a strong predictor of adolescent marijuana use.[11,25,26,28] Past research conducted with predominantly white samples indicates that peers and friends are prominent in influencing adolescents to use marijuana.[4,29] Moreover, in more recent research with a predominantly ethnic-minority inner-city sample, friends' marijuana use predicted adolescent marijuana use.[30]

Individual psychosocial characteristics may serve as risk or protective factors for adolescent marijuana use according to Jessor's problem behavior theory.[31] The theory suggests that some adolescents find deviant behaviors (such as drug use and drinking) functional because the acts help them achieve status and personal goals. Other adolescents who are efficacious in using life skills (social, communication, and assertive skills) may be protected from drug use. Assertiveness and decision-making skills could have important predictive value. Psychosocial characteristics such as drug refusal and advertising resistance skills are not included in Jessor's model and have not been examined in drug etiology; they may weigh heavily in predicting abstinence. Adolescents who currently use drugs and who have poor resistance skills are likely to increase drug use.[32] Positive attitudes toward drugs and lack of knowledge about drugs possibly might increase risk for use; therefore, we hypothesize that individual characteristics such as marijuana knowledge and antimarijuana attitudes may also be salient in the prediction of marijuana use. Problem behaviors, such as trouble at home and school, are likely to predict drug use. In recent work, Epstein and colleagues[30] found that lack of knowledge about the prevalence and negative social consequences of marijuana use, positive attitudes toward marijuana use, and inadequate social, communication, and refusal skills increased the likelihood of using marijuana.

The purpose of this study was to examine several dimensions of risk, including background factors (e.g., number of parents living at home, church attendance, academic performance), social influences (e.g., adult norms, friends' marijuana use), and individual psychosocial factors (e.g., antimarijuana attitudes, drug refusal skills, advertising resistance skills) in adolescents living in public housing. The dimensions of risk included in this study were organized into conceptually and theoretically meaningful clusters of risk factors based in part on the most prominent theories of adolescent drug use.[33] To date, no research has concentrated on examining the determinants of marijuana use of youths in public housing. This investigation is important because identification of the determinants of marijuana use in this population can guide the development of prevention approaches for youths who generally are regarded to be at high risk, but for whom there is a paucity of research.

METHOD

Sample

Data for the current study were obtained as part of a prospective investigation of the etiology and prevention of drug abuse. Using a top-down approach, a project coordinator solicited participation in the study from district superintendents, drug prevention specialists, principals, and then teachers. An affirmative response was required at every level. The majority of those invited to participate accepted and enrolled their schools to begin the study in spring 1994.

At the completion of data collection, using a complete list of housing developments provided by the Housing Authority of New York City, research assistants designated participants' home addresses as either a public housing development or not. Based on federal guidelines (determined by resident's income status), this sample (N = 624 seventh graders) included federally funded middle low-income (n = 268) and low-income housing residents (n = 356). Comparison of these two groups revealed few significant differences in any of the major demographic, psychological, and behavioral measures; therefore, they were collapsed into one group for subsequent analyses. For purposes of this study, only baseline data were used.

The mean age of the sample was 12.87 years (standard deviation [SD] = .53). The sample was 42% male, 27% Hispanic, and 73% black. The majority of these youths lived in single-parent, female-headed households (54%) and received free or partially subsidized lunches while at school (64%). This sample was comprised largely of adolescents from economically disadvantaged backgrounds. The major-

ity of students were enrolled in schools that are recipients of a federal subsidy known as the Title I Program. Only schools in which 66% of its students are eligible for free lunch and Aid to Families with Dependent Children (AFDC) are eligible to receive funds from the Title I Program. The median gross income of a family of 2.5 members living in public housing developments was $12,619. Furthermore, 1 in 3 of all public housing residents have been found to be recipients of public assistance.[34] Proportional analyses indicated no differential composition based on gender for black or Hispanic youth. Passive parental consent procedures were used, and less than 1% of the entire baseline pretest sample refused participation.

Procedure

All students in the study completed a questionnaire in class during a regular 40-minute period. A team of three to five data collectors, who were members of the same minority groups as the students participating in the study, administered the questionnaire according to a standardized protocol. Classroom teachers were not involved in data collection. The data collectors read instructions aloud, which stated in part: "The questionnaire is not a test; there are no right or wrong answers. Just give the best answer you can. Also, there are a lot of questions, and you may not finish all of them. That's okay. Do as many as you can, working quickly but carefully." Seventh grade students in focus groups indicated that they were able to understand the questions. The questionnaire language is rated at a sixth grade English reading level based on Thorndike-Lorge criteria. The data collectors stressed confidentiality (a Certificate of Confidentiality was obtained from the US Department of Health and Human Services), reassuring students that their teachers, principals, and parents would not be allowed to see their responses. The students also provided a breath sample for carbon monoxide (CO) testing. Although correlations between CO levels and self-reports of smoking behavior among students in this age group are typically too low to use as an independent validity check, collecting CO samples in conjunction with self-report data has been found to increase the veracity of self-reported smoking data.[35] Furthermore, data from the Monitoring the Future Study indicate a high degree of reliability in a three-wave panel design for self-report measures of smoking in adolescents.[1]

Measures

The questionnaire included self-report measures of marijuana use, background information, social environmental variables, and psychosocial characteristics rele-

vant to drug use. Reliabilities (Cronbach's alpha) are indicated below in parentheses. All of the scales were found to have good reliabilities. Moreover, these scales have been used extensively in previous research with minority youth.[30,36,37]

Marijuana use. Frequency of marijuana use was assessed by the question: "About how often (if ever) do you smoke marijuana (grass, pot) or hashish (hash)?" Responses ranged from "never" (1) to "more than once a day" (9). Another item assessed intentions to use marijuana in the future: "Do you think you will use marijuana or hashish (pot, reefer, weed, blunts) within the next year?" Responses ranged from "definitely not" (1) to "definitely will" (5).

Background variables. Several items assessed sociodemographic characteristics and other background variables, including age, gender, nuclear family status (intact versus other), and ethnic (racial) self-identification. A single item asked students about their means of obtaining lunch (e.g., subsidized or free lunch) and was used to assess socioeconomic status (SES). Academic achievement was assessed by asking students to indicate the grades they usually received, with responses ranging from "mostly A's" (5) to "D's or lower" (1). Attendance at church or religious services was rated on an 8-point scale, with responses ranging from "More than once a week" (8) to "Never" (1). Students also rated how frequently they were absent from school in the last year, with responses ranging from "None" (1) to "16 or more days" (5).

Social environmental variables. Perceived social influences, including friends' marijuana use ("How many of your friends do you think smoke marijuana?"), peer norms ("How many people your age do you think smoke marijuana?"), and adult norms ("How many adults do you think smoke marijuana?") were rated on a 5-point scale ranging from "none" (1) to "all or almost all" (5).

Antimarijuana attitudes. Respondents' attitudes about marijuana, the characteristics of users, and the perceived social benefits of smoking marijuana were assessed.[38] Five items were used to assess attitudes about marijuana (Cronbach's alpha = .79). Responses were indicated on five-point Likert scales and ranged from "strongly disagree" to "strongly agree." Items for this measure were reversed to indicate antimarijuana smoking attitudes.

Marijuana knowledge. Using a true/false format, a four-item scale was used to assess knowledge about the immediate/short-term consequences, prevalence, and social acceptability of marijuana use.[38]

Marijuana refusal. Students indicated whether they would say "no" when someone tries to get them to use marijuana. The measure used was a five-point single item with responses that ranged from "definitely would" to "definitely would not." The marijuana refusal item was derived from prior research.[39,40]

Drug refusal skills. With response categories identical to those for marijuana refusal, a five-item (Cronbach's alpha = .86) measure presented respondents with ways of saying "no" to offers to smoke, drink, or use other drugs.[41] Respondents rated the probability that they would use a particular method (e.g., change the subject, make up an excuse, and leave).

Assertiveness. General assertiveness was assessed using 10 items derived from Gambrill and Richey's Assertion Inventory[42] (Cronbach's alpha = .81). The responses were rated on five-point Likert scales and ranged from "definitely would" to "definitely would not." Examples of assertive behavior include returning defective merchandise and speaking up when someone steps ahead in line.

Decision-making skills. Five items measured decision making (Cronbach's alpha = .89), with responses on five-point scales ranging from "never" to "almost always."[41] The decision-making measure assessed sound decision-making skills (e.g., "When I have a problem, I get information that is needed to deal with the problem").

Advertising resistance skills. A five-item scale assessed students' skepticism about promotional advertising in general and specifically to alcohol and tobacco (Cronbach's alpha = .81). A sample item was: "When I see or hear an advertisement, I think about whether what the ad says is true." Response categories ranged from "never" (1) to "always" (5).[41]

Trouble index. A three-item measure was used to assess the frequency of problem behavior in the past month.[39,40] Respondents rated how often they got into trouble in each of three domains (school, home, and with police); 5-point scales were used, with responses ranging from "never" (1) to "more than four times" (5).

Data Analysis Plan

Correlations were computed to examine the relationship between each of the marijuana use measures and the background variables, social environmental variables, and individual psychosocial characteristics. Then, a series of logistic regression analyses was conducted to determine which of the variables were the most salient predictors of marijuana use. Logistic regressions were conducted

because the distributions were skewed due to the low levels of marijuana use at this age.

The two dependent (as well as the independent) measures were recoded for the logistic regression analyses. The marijuana use item was recoded "0" for never having smoked marijuana or "1" for having smoked marijuana to compare students who never tried marijuana to students who had tried marijuana. The item assessing future marijuana use was recoded "0" for no plans to smoke it in the future or "1" for some plans to smoke marijuana in the future. For the psychosocial characteristics, items were dichotomized using median splits.

The logistic regression analyses were conducted as follows. For each dependent variable (experimental marijuana use and future marijuana smoking), three preliminary logistic regressions were run that corresponded to each domain (background variables, social environmental variables, and psychosocial variables). In the final logistic regression for each dependent variable, on a single step, only significant predictors from each domain were entered. Individuals for whom any of the variables in the equation were missing were omitted from the analysis.

RESULTS

Table I includes the results of preliminary analyses that include mean values and standard deviations for marijuana use and the predictor variables. The number of participants included in each analysis is also listed in this table.

Correlates of Marijuana Use

Correlations between marijuana use and background variables, social environmental factors, and individual characteristics are presented in Table II. Frequency of marijuana use was related significantly to age and related marginally to family structure (two-parent vs. single-parent households). Intention to use marijuana in the future was related significantly to family structure.

Several of the social environmental variables were related significantly to marijuana use. These include peer norms, perceived availability of marijuana, and friends' marijuana use. All of the social environmental variables were related significantly to intentions to smoke marijuana in the future.

Significant correlations were found between marijuana use and several individual psychosocial characteristics. Less-frequent marijuana use was correlated marginally with more general assertiveness and advertising resistance skills and significantly correlated with antimarijuana attitudes and more drug refusal skills. Intention to use marijuana in the future was correlated significantly with antimari-

TABLE I Mean Values for Marijuana Use and Predictor Variables

Variable	N	Mean	SD
Marijuana use			
Experimental marijuana smoking	624	1.11	.65
Intentions to smoke in the future	613	1.14	.53
Predictor variables			
Absenteeism	624	2.85	1.06
Church attendance	624	4.91	2.53
Academic performance	624	3.49	.92
Adult norms	615	3.77	1.17
Peer norms	617	2.87	1.30
Perceived availability of marijuana	597	2.31	1.19
Friends' marijuana use	616	2.11	1.22
Antimarijuana attitudes	591	85.97	15.82
Marijuana knowledge	590	31.69	19.70
Marijuana refusal	475	2.56	1.69
Drug refusal skills	514	75.55	28.52
Assertiveness	475	79.94	16.89
Decision-making skills	428	74.10	24.45
Advertising resistance skills	395	67.14	26.99
Trouble in the past month	580	30.53	21.94

SD, standard deviation.

juana attitudes, higher drug refusal skills, more resistance to promotional advertising, and less involvement in trouble.

CONCURRENT PREDICTORS OF MARIJUANA USE

Table III presents the predictors of marijuana use (ever use) in the final logistic regression model. According to this model, significant predictors of marijuana use included school absenteeism, perceived availability of marijuana, and friends' marijuana use. Examination of the odds ratios associated with the logistic regression indicated that the odds of using marijuana were more than four times greater for adolescents who reported being absent from school for 16 or more days compared to those who missed 15 or fewer days from school. The odds of ever having tried marijuana were nearly 10 times greater for students who perceived that obtaining marijuana was easy. Students who reported that at least half of their friends used marijuana were more than 12 times likely to be marijuana users themselves.

CONCURRENT PREDICTORS OF INTENTION TO USE MARIJUANA IN THE FUTURE

Table IV presents predictors for the final logistic regression model for intention to smoke marijuana in the future. According to this model, significant predictors

TABLE II Relationship Between Marijuana Use and Predictor Variables

Variable	Frequency of Marijuana Smoking	Intentions to Smoke in Future
Background variables		
Age	.10*	.07†
Socioeconomic status (free lunch)‡	.05	.01
Two-parent household	.07†	.09*
Gender§	.00	.02
Ethnicity‖	.02	.00
Absenteeism	.01	.05
Church attendance	−.01	−.01
Academic performance	−.04	−.05
Social environmental variables		
Adult norms	.05	.10*
Peer norms	.14¶	.24¶
Perceived availability of marijuana	.13¶	.20¶
Friends marijuana use	.30¶	.45¶
Individual psychosocial characteristic variables		
Antimarijuana attitudes	−.21¶	−.38¶
Marijuana knowledge	−.07	−.03
Marijuana refusal	.02	.06
Drug refusal skills	−.15¶	−.21¶
Assertiveness	−.09†	−.03
Decision-making skills	−.07	−.08†
Advertising resistance skills	−.09†	−.11
Trouble in past month	.04	.17¶

*$P < .05$.

†$P < .10$.

‡Positive indicates receipt of free or reduced lunch; negative indicates paid or brought lunch.

§Positive indicates that boys scored higher; negative indicates girls scored higher.

‖Positive indicates Hispanics scored higher; negative indicates African-Americans scored higher.

¶$P < .001$.

of intention to use marijuana in the future were perceived availability of marijuana, friends' marijuana use, antimarijuana attitudes, and drug refusal skills. The odds of having intentions to smoke marijuana in the future were over 4.5 times greater for students who perceived that obtaining marijuana was easy. Students who reported that at least half of their friends used marijuana were 28 times more likely to indicate that they intended to use marijuana in the future. Positive attitudes toward marijuana were associated with having intentions to smoke marijuana in the future. Students with low antimarijuana attitudes were

TABLE III Predictors of Experimental Smoking (Ever Use): Final Logistic Regression Model

Variable	Odds Ratio	95% Confidence Interval
Absenteeism (low*)		
High	4.14	1.29–13.29
Perceived availability of marijuana (low*)		
High	9.84	1.29–75.26
Friends' marijuana use (none*)		
<50% to all or almost all	12.45	3.60–43.12
Marijuana knowledge (high*)		
Low	2.40	.98–5.87

*Reference group.

2.5 times more likely to have intentions to use marijuana within the next year. Finally, individuals who reported low drug refusal skills were over 4.5 times more likely to indicate that they intended to use marijuana in the future.

DISCUSSION

Factors that influence marijuana use among youths are of considerable importance as prevalence rates increase and initiation starts at younger ages.[1,25,43,44] Even though there is substantial evidence indicating that environmental factors such as poverty and crime may increase drug use risk, few empirical studies examine adolescent marijuana use etiology in such contexts. This study explored the psychosocial determinants of adolescent marijuana use within a high-risk environment (low-income public housing developments). Major strengths of this investigation are that it concentrated on young adolescents just at the point of

TABLE IV Predictors of Intentions to Smoke Marijuana in Future: Final Logistic Regression Model

Variable	Odds Ratio	95% Confidence Interval
Perceived availability of marijuana (low*)		
High	4.74	1.35–16.67
Friends' marijuana use (none*)		
<50% to all or almost all	28.51	6.63–122.61
Anti-marijuana attitudes (high*)		
Low	2.49	1.03–6.06
Drug refusal skills (high*)		
Low	4.62	1.66–12.84

*Reference group.

initiation; included a sample of adolescents exposed to the most concentrated poverty, violence, and drug use; and examined two measures of marijuana use (use and intention to use in the future). The results of this study indicate which factors were related to marijuana use for these youth. Social influences from friends, as well as perceived availability of drugs, predicted initiation and plans to use marijuana in the future. Furthermore, individual characteristics such as antimarijuana attitudes and drug refusal skills were associated with a lower likelihood of using marijuana.

Public housing developments typically are characterized by high rates of unemployment and crime.[7–12,45] Considerable research has shown that continued stressors associated with these conditions may have negative effects on adolescent development, including poor competence, increased school dropout rates, violence, and inadequate social skills.[15] All of these are known precursors of illicit drug use. It is essential, then, to learn if the adaptational skills of these youths are influenced adversely by their exposure to a deleterious environment and whether prevention efforts can focus specifically on building resilience that can retard acquisition of early-stage drug use.

In the present study, age, SES, family structure, gender, and ethnicity did not reach significance among the background variables. Since this sample only included students in one grade level, there was too little variation in age to detect the effects of being older. SES also was restricted. That gender did not predict marijuana use may be attributed to the fact that gender differences have been narrowing in recent times, and gender differentials are more pronounced for more serious levels of drug use.[1] Alternatively, gender differences may not have developed yet, as shown in prior research with inner-city minority seventh graders.[30] It is unclear why there were no ethnic differences. Although the students may differ in their cultural backgrounds, they share family and environmental characteristics. Of the background variables, absenteeism proved to be the sole predictor of marijuana use, adding support to Jessor's[31] work, which suggests that, for adolescents, truancy may function as a way to achieve status and personal goals.

Within the social environmental domain, use by friends predicted marijuana use and intention to use marijuana in the future. Students who perceived that marijuana use was prevalent among their friends were more likely to have tried marijuana and to intend to use marijuana in the future relative to students who reported that few of their friends use marijuana. Youths' perception that deviant behaviors are standard practice among their peers may promote deviance through

establishment of negative normative beliefs.[27] These findings replicate those found in prior studies with predominantly white samples[46-49] and minority samples.[5,26,30] Friends' marijuana use may be a particularly potent social influence among youths living in public housing developments who are at heightened risk for drug use. The present findings provided further theoretical support for Bandura's[27] social learning theory, which posits that adolescence is characteristically an impressionable point in development, and that children learn largely through reinforcement and modeling. Interestingly, the perception that marijuana is easily available was a significant predictor of use, as well as intention to use, of marijuana in the future, lending support to the interpretation that drug-entrenched environments may heighten the risk of becoming involved with marijuana and other drugs. The perception by housing adolescents that they can procure marijuana easily is a serious risk factor and can be placed among a set of problem behaviors that Jessors[31] postulates are functional for troubled adolescents who will become engaged in such behaviors to achieve social admiration, high esteem, and status among their age-mates.

Individual characteristics proved to have value in predicting marijuana use among this urban minority sample. Students who had poor drug refusal skills were more likely to report intentions to smoke marijuana in the future. Similarly, individuals who had antimarijuana attitudes were less likely to have future intentions to use marijuana. Students with poor drug refusal skills also were more likely to have used marijuana in their lifetimes. These findings suggest that students who are efficacious in using well-developed refusal skills (using firm and varied rejections to offers to use drugs) were at decreased risk for using marijuana.

This study has limitations that should be considered. As this study focused on a school-based sample, findings cannot be generalized to adolescents not in school. However, this study was comprised of students in seventh grade, for whom dropout rates remain low. Absentee data were minimized by pursuing absentees on at least one return data collection. Second, the cross-sectional nature of these data prevent us from exploring developmental trends that might accentuate drug abuse. For instance, if housing developments are associated with heightened risk, it may be as the youths in them get older, they are forced to choose between remaining in school or dropping out to peddle drugs and participate in delinquent activities for economic gain. National educational statistics reveal that between 15 and 18 years of age dropout rates increase dramatically.[6] Subjects in our sample were 13 and 14 years old, which may have prevented us from

exploring some of the developmental processes that culminate in delinquent behavior. Future studies are warranted that follow these youths over time to track the development of conditions that promote marijuana use.

Preadolescent and adolescent youths in public housing are at particularly high risk for using drugs. In the social milieu of public housing developments, several forces culminate to make the transition into young adulthood especially pernicious for these impressionable youths. While adolescence can be challenging for youths from even the most protected backgrounds, for adolescents in public housing, the risks of precocious drug use are heightened. Children living in poverty must contend with and negotiate multiple problems. The probability of a child developing problems increases rapidly as the number of family problems or risk factors increases.[50] When children are afflicted persistently by family and environmental problems, their probability of using marijuana increases exponentially.[51,52]

The domains and variables that emerged from this study indicate that some of the same models and conceptualizations based on research with predominantly white, suburban samples[46] can be employed meaningfully in developing prevention models among ethnic minority youths living in low-income public housing developments. The results of this study have several implications for developing effective drug prevention programs for economically disadvantaged minority youths living in high-risk environments such as urban public housing developments. Such programs should provide these adolescents with an awareness of the various social influences to smoke marijuana. For residents of public housing developments, it is imperative to correct misperceptions about the prevalence of smoking among friends, peers, and adults and other high-risk centers. Furthermore, adolescents living in housing developments need to be provided with positive non-drug-using role models and an awareness that negative influences can come from their most immediate surroundings. Having the competency, agency, and skills to refuse offers to use marijuana will prove to be most valuable components of any prevention efforts. Teaching adolescents to reject media influences to smoke marijuana and to become more skeptical toward popular images of influence ranks chief among sound prevention efforts. Finally, as with all adolescents, in the prevention of drug use, it is critical to target other problem behaviors (e.g., absenteeism and getting in trouble).

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